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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,736	11/21/2005	Takaki Sugimoto	58346US005	6659
32692 7590 05/16/2007 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER BODAWALA, DIMPLE N	
			ART UNIT 1722	PAPER NUMBER
			NOTIFICATION DATE 05/16/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/537,736

Applicant(s)

SUGIMOTO, TAKAKI

Examiner

Dimple N. Bodawala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :4/18/2007, 10/02/2006, 9/19/2005, 8/8/2005,6/7/2005.

**DETAILED ACTION**

***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-19, drawn to a flexible mold.

Group II, claim(s) 20-22, drawn to a method of manufacturing a flexible mold.

The inventions listed as Groups II and I do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Claim 20 is either obvious or anticipated by either Kikuchi et al. (US 6,761,607 B2) or Chiu et al. (US 6,247,986 B1). Accordingly, the special technical feature linking the two inventions, the flexible mold, does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore, restriction is appropriate.

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During a telephone conversation with Carolyn A. Fischer on April 26<sup>th</sup>, 2007 a provisional election was made with traverse to prosecute the invention of Group I (Flexible mold), claims 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Objections***

Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Because claim 13 does not show the proper dependent form, which means it does not show from claims 1 to 12 on which claim 13 depends for the instant application. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U S C 112, second paragraph because claim 2 does not recite proper Markush type language. The proper Markush group should end with "and", which is not cited in claim 2 by the applicant. Therefore, appropriate correction is required (See MPEP 2173.05 (h)).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kikuchi et al. (U S Patent No. 6,761,607 B2).

Kikuchi ('607) discloses the mold which comprises the mold layer (4) having on the surface thereof a groove pattern of specified shape and size (See abstract; and figure 10), wherein

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the mold layer (4) comprises the lithium salt of an organic fluorine as an antistatic agent (See col.5 lines 11-25); wherein the lithium salt of an organic fluorine compound is blended in an amount of 0.9% by weight relative to the amount of the resin material forming the mold layer (See example 1).

Kikuchi ('607) further comprises the mold layer, which is transparent and consists of a hardened product of a curable resin material, which is selected from the group of a photo curable monomer such as acrylic monomer. It further teaches that the curable resin material is selected from the group of acrylate oligomer, wherein the acrylate oligomer is selected from the group of urethane acrylate. It further teaches that the mold layer has a thickness of 500  $\mu\text{m}$  (See Example 1; col.4 lines 46-56; and col.5 lines 60-63).

Kikuchi ('607) further discloses the mold with support carrying said mold layer; wherein the support is a film of plastic material and selected from the group consisting of polyethylene terephthalate (PET) with a thickness of 50  $\mu\text{m}$  (See Example 1; and col. 4 lines 27-42).

Kikuchi ('607) discloses the mold is used for molding ribs of a back panel for a plasma display panel (PDP) (See col.2 lines 36-38). It further teaches that the groove pattern of the mold

layer is a straight pattern composed of a plurality of grooves arranged at a constant spacing generally in parallel to each other; wherein the groove pattern of the mold layer is a lattice-shaped pattern composed of a plurality of grooves arranged so as to cross at a constant spacing generally in parallel to each other (See col.3 lines 4-7; col.4 lines 43-46; and col.7 lines 24-32). Lithium salt of an organic fluorine compound is not decomposed thermally at temperature below 200 degree C, because Lithium salt has high boiling point for decomposition thermally during the course of molding process using the mold (For further clarification see website <http://www.noblemind.com/search.exe?keyword=Lithium+Boiling+Point&var=2> ).

Kikuchi ('607) discloses all the claimed structural limitations, and, thus, the claims are anticipated.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject



matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (U S Patent No. 6,761,607 B2) in view of Chiu et al. (U S Patent No. 6,247,986 B1).

Kikuchi ('607) discloses all claimed structural limitation as discussed above. It further teaches the mold layer with the groove pattern, but does not disclose the depth and width of the groove at the surface of the mold layer.

In the analogous art, Chiu ('986) discloses the mold, which comprises the mold layer with the groove pattern, in which the groove pattern is defined by plane portion and grooves (See figure 1); and wherein the groove has depth of 120  $\mu\text{m}$  to 140  $\mu\text{m}$  and the width of 20  $\mu\text{m}$  to 75  $\mu\text{m}$  as measured at the surface of said mold layer (See col.5 lines 64-67).

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It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Kikuchi ('607) by providing the depth and the width of the groove in the groove pattern which is measured at the surface of the mold layer because such an alignment supports the groove pattern of the layer to match closely the pitch of the electrodes across the entire width of the display area (See col.6 lines 1-6) as suggested by Chiu ('986).

#### ***Conclusion***


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dimple N. Bodawala whose telephone number is (571) 272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNB

  
YOGENDRA N. GUPTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700